

SEQUENCE LISTING

<110> TING, ALICE

<120> GENETICALLY ENCODED FLUORESCENT REPORTERS OF KINASE,
METHYLTRANSFERASE, AND ACETYL-TRANSFERASE ACTIVITIES

<130> M00656.70097.US

<140> NOT YET ASSIGNED

<141> 2003-08-05

<150> US 60/425,578

<151> 2002-11-12

<160> 22

<170> PatentIn version 3.2

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<211> 40

<212> PRT

<213> Homo sapiens

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Arg Lys Gln Leu Ala Thr Lys Ala Ala Arg Lys Ser Ala Pro Ala Thr
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Gly Gly Val Lys Lys Pro His Arg
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<211> 30

<212> PRT

<213> Homo sapiens

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<210> 3

<211> 109

<212> PRT

<213> Saccharomyces cerevisiae

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20 25 30

Val Pro Asp Tyr Tyr Asp Phe Ile Lys Glu Pro Met Asp Leu Ser Thr
35 40 45

Met	Glu	Ile	Lys	Leu	Glu	Asn	Lys	Tyr	Gln	Lys	Met	Glu	Asp	Phe	Ile
50						55					60				
Tyr	Asp	Ala	Arg	Leu	Val	Phe	Asn	Asn	Cys	Arg	Met	Tyr	Asn	Gly	Glu
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Asn	Thr	Ser	Tyr	Tyr	Lys	Tyr	Ala	Asn	Arg	Leu	Glu	Lys	Phe	Phe	Asn
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Asn	Lys	Val	Lys	Glu	Ile	Pro	Glu	Tyr	Ser	Leu	Ile	Asp			
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 <212> DNA
 <213> *Saccharomyces cerevisiae*

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gccgacaagc	agaagaacgg	catcaaggcc	cacttcaaga	tccgccacaa	catcgaggac	540
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<210> 5
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 <212> PRT
 <213> *Saccharomyces cerevisiae*

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 35 40 45
 Leu Thr Leu Lys Phe Ile Cys Thr Thr Gly Lys Leu Pro Val Pro Trp
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 Pro Thr Leu Val Thr Thr Leu Thr Trp Gly Val Gln Cys Phe Ser Arg
 65 70 75 80
 Tyr Pro Asp His Met Lys Gln His Asp Phe Phe Lys Ser Ala Met Pro
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 Glu Gly Tyr Val Gln Glu Arg Thr Ile Phe Phe Lys Asp Asp Gly Asn
 100 105 110
 Tyr Lys Thr Arg Ala Glu Val Lys Phe Glu Gly Asp Thr Leu Val Asn
 115 120 125
 Arg Ile Glu Leu Lys Gly Ile Asp Phe Lys Glu Asp Gly Asn Ile Leu
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 Gly His Lys Leu Glu Tyr Asn Tyr Ile Ser His Asn Val Tyr Ile Thr
 145 150 155 160
 Ala Asp Lys Gln Lys Asn Gly Ile Lys Ala His Phe Lys Ile Arg His
 165 170 175
 Asn Ile Glu Asp Gly Ser Val Gln Leu Ala Asp His Tyr Gln Gln Asn
 180 185 190

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Pro	His	Asp	Ala	Ala	Ile	Gln	Asn	Ile	Leu	Thr	Glu	Leu	Gln	Asn	His
				245					250					255	
Ala	Ala	Ala	Trp	Pro	Phe	Leu	Gln	Pro	Val	Asn	Lys	Glu	Glu	Val	Pro
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Asp	Tyr	Tyr	Asp	Phe	Ile	Lys	Glu	Pro	Met	Asp	Leu	Ser	Thr	Met	Glu
		275					280					285			
Ile	Lys	Leu	Glu	Ser	Asn	Lys	Tyr	Gln	Lys	Met	Glu	Asp	Phe	Ile	Tyr
	290					295					300				
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Thr	Ser	Tyr	Tyr	Lys	Tyr	Ala	Asn	Arg	Leu	Glu	Lys	Phe	Phe	Asn	Asn
				325					330					335	
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			420					425					430		
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Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr Asn Tyr Asn Ser
530 535 540

His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn Gly Ile Lys Val
545 550 555 560

Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser Val Gln Leu Ala
565 570 575

Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly Pro Val Leu Leu
580 585 590

Pro Asp Asn His Tyr Leu Ser Tyr Gln Ser Ala Leu Ser Lys Asp Pro
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Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe Val Thr Ala Ala
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<212> DNA
<213> Drosophila melanogaster

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<210> 7
<211> 803
<212> PRT
<213> Drosophila melanogaster

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Pro	Thr	Leu	Val	Thr	Thr	Leu	Thr	Trp	Gly	Val	Gln	Cys	Phe	Ser	Arg	65	70	75
Tyr	Pro	Asp	His	Met	Lys	Gln	His	Asp	Phe	Phe	Lys	Ser	Ala	Met	Pro	85	90	95
Glu	Gly	Tyr	Val	Gln	Glu	Arg	Thr	Ile	Phe	Phe	Lys	Asp	Asp	Gly	Asn	100	105	110
Tyr	Lys	Thr	Arg	Ala	Glu	Val	Lys	Phe	Glu	Gly	Asp	Thr	Leu	Val	Asn	115	120	125
Arg	Ile	Glu	Leu	Lys	Gly	Ile	Asp	Phe	Lys	Glu	Asp	Gly	Asn	Ile	Leu	130	135	140
Gly	His	Lys	Leu	Glu	Tyr	Asn	Tyr	Ile	Ser	His	Asn	Val	Tyr	Ile	Thr	145	150	155
Ala	Asp	Lys	Gln	Lys	Asn	Gly	Ile	Lys	Ala	His	Phe	Lys	Ile	Arg	His	165	170	175
Asn	Ile	Glu	Asp	Gly	Ser	Val	Gln	Leu	Ala	Asp	His	Tyr	Gln	Gln	Asn	180	185	190
Thr	Pro	Ile	Gly	Asp	Gly	Pro	Val	Leu	Leu	Pro	Asp	Asn	His	Tyr	Leu	195	200	205
Ser	Thr	Gln	Ser	Ala	Leu	Ser	Lys	Asp	Pro	Asn	Glu	Lys	Arg	Asp	His	210	215	220
Met	Val	Leu	Leu	Glu	Phe	Val	Thr	Ala	Ala	Arg	Met	His	Gly	Thr	Thr	225	230	235
Val	His	Cys	Asp	Tyr	Leu	Asn	Arg	Pro	His	Lys	Ser	Ile	His	Arg	Arg	245	250	255
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Asn	Ala	Lys	Val	Val	Lys	Asp	Tyr	Tyr	Lys	Ile	Ile	Thr	Arg	Pro	Met	290	295	300
Asp	Leu	Gln	Thr	Leu	Arg	Glu	Asn	Val	Arg	Lys	Arg	Leu	Tyr	Pro	Ser	305	310	315
Arg	Glu	Glu	Phe	Arg	Glu	His	Leu	Glu	Leu	Ile	Val	Lys	Asn	Ser	Ala	325	330	335
Thr	Tyr	Asn	Gly	Pro	Lys	His	Ser	Leu	Thr	Gln	Ile	Ser	Gln	Ser	Met	340	345	350
Leu	Asp	Leu	Cys	Asp	Glu	Lys	Leu	Lys	Glu	Lys	Glu	Asp	Lys	Leu	Ala	355	360	365

Arg	Leu	Glu	Lys	Ala	Ile	Asn	Pro	Leu	Leu	Asp	Asp	Asp	Asp	Gln	Val	370	375	380	
Ala	Phe	Ser	Phe	Ile	Leu	Asp	Asn	Ile	Val	Thr	Gln	Lys	Met	Met	Ala	385	390	395	400
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Arg	Lys	Asn	Ile	Ser	Lys	His	Lys	Tyr	Gln	Ser	Arg	Glu	Ser	Phe	Leu	435	440	445	
Asp	Asp	Val	Asn	Leu	Ile	Leu	Ala	Asn	Ser	Val	Lys	Tyr	Asn	Gly	Pro	450	455	460	
Glu	Ser	Gln	Tyr	Thr	Lys	Thr	Ala	Gln	Glu	Ile	Val	Asn	Val	Cys	Tyr	465	470	475	480
Gln	Thr	Leu	Thr	Glu	Tyr	Asp	Glu	His	Leu	Thr	Gln	Leu	Glu	Lys	Asp	485	490	495	
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Leu	Val	Thr	Thr	Phe	Gly	Tyr	Gly	Leu	Met	Cys	Phe	Ala	Arg	Tyr	Pro	625	630	635	640
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Tyr	Val	Gln	Glu	Arg	Thr	Ile	Phe	Phe	Lys	Asp	Asp	Gly	Asn	Tyr	Lys	660	665	670	
Thr	Arg	Ala	Glu	Val	Lys	Phe	Glu	Gly	Asp	Thr	Leu	Val	Asn	Arg	Ile	675	680	685	
Glu	Leu	Lys	Gly	Ile	Asp	Phe	Lys	Glu	Asp	Gly	Asn	Ile	Leu	Gly	His	690	695	700	

Lys Leu Glu Tyr Asn Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp
705 710 715 720

Lys Gln Lys Asn Gly Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile
725 730 735

Glu Asp Gly Ser Val Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro
740 745 750

Ile Gly Asp Gly Pro Val Leu Leu Pro Asp Asn His Tyr Leu Ser Tyr
755 760 765

Gln Ser Ala Leu Ser Lys Asp Pro Asn Glu Lys Arg Asp His Met Val
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Leu Tyr Lys

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Lys Gly

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Lys Gly

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<210> 18
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<212> PRT
<213> Homo sapiens

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